

**COMMONWEALTH OF MASSACHUSETTS
BEFORE THE
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY**

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Investigation by the Department of)	
Telecommunications and Energy on its own)	D.T.E. 02-38
Motion into Distributed Generation.)	
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**REPLY COMMENTS OF
WESTERN MASSACHUSETTS ELECTRIC COMPANY**

On August 1, 2002, Western Massachusetts Electric Company (“WMECO”) and 34 parties submitted comments to the four questions set out by the Department of Telecommunications and Energy (“Department”) in its June 13th Order on distributed generation (“DG”). After reviewing the other parties’ comments, WMECO wishes to focus the Department’s attention on three issues by offering the following reply comments.

The Department should consider a collaborative approach to resolve issues in this proceeding.

One comment that appeared in many parties’ comments was that the Department should consider a collaborative effort by interested parties. WMECO supports a collaborative process to tackle the many complex, technical issues raised by the possible introduction of significant amounts of DG.

Distribution company ownership of DG should be allowed and encouraged

In its initial comments, WMECO supported distribution company ownership of DG both on the grid and behind the customer’s meter. WMECO Comments at 13. Likewise, distribution company

ownership of DG was supported by a number of other parties. For example, Stone & Webster Consultants (“Stone & Webster”) states that distribution company ownership can lead to better implementation timing to respond to short-term planning horizons, possibly using portable or movable DG installations that can be implemented prior to successive peak-load periods. Stone & Webster Comments at 7. The Gas Technology Institute (“GTI”) supports distribution company ownership of DG systems below 20 MW, because it would allow distribution companies to invest in innovative DG applications that improve grid utilization. GTI Comments at 6. The Massachusetts Community Action Program Directors Association Inc. (“MASSCAP”) (page 3) supports distribution company ownership of DG as a means to promote the deployment of DG. MASSCAP Comments at 3. The Capstone Turbine Corporation (“CTC”) believes that competition in the electricity industry is better served by allowing the distribution company to compete with other providers to deliver these on-site services. CTC Comments at 10. Based on these comments, distribution company ownership of DG will promote the deployment of DG and will support innovative DG applications. The Department should further investigate allowing distribution company ownership of DG in this proceeding.

Additional study and experience is needed on the cumulative effect of multiple DG installations on a circuit. At this time, the 15% rule should be used to assure successful installations.

In its initial comments, WMECO stated that its distribution systems were not designed to accommodate a significant amount of generation supplied by numerous individual generators. WMECO Comments at 2. The distribution systems also were not designed to accommodate the multi-directional power flows that DG would create. As a result, DG may cause a variety of undesirable conditions including power quality problems, degradation of system reliability, reduced efficiency, potentially damaging over-voltage and various safety issues. Massachusetts Electric Company (“MECO”) points

out in its comments that the addition of even relatively small amounts of generating capacity directly at the distribution level can have significant local effects because of the relatively localized nature of the distribution system. MECO Comments at 2.

These problems can be solved if appropriate system design, control and protection are included. WMECO has been meeting with the other Massachusetts utilities to review their interconnection standards. As this process advances and the industry gains experience on the installation of DG, WMECO suggests that the cumulative effects of multiple DG installations on a single feeder be examined so their impacts can be included in these guidelines. Until sufficient information is collected about the effects that multiple DG installations have on a single feeder, WMECO suggests that their cumulative effects be carefully monitored.

It has been suggested that on average, a distribution circuit could likely handle interconnected DG at 10-15% of its capacity without substantial redesign. With today's technology, DG cannot simply be considered a plug-in device. If DG penetration on feeders becomes a significant fraction of the total distribution load, then distributed system designs may start to become incompatible and safety could be jeopardized. WMECO recommends that 10-15% of a feeder's capacity be set as the upper limit for the amount of DG added to any given feeder until the full impact of their cumulative effects is understood.

Conclusion

WMECO appreciates this opportunity to supplement its initial comments on the above issues. WMECO is planning to participate in the August 21st public hearing and welcomes the opportunity to work with other interested parties to resolve the issues affecting DG.